

REMARKS

Claims 31 to 34 are added, and therefore claims 16 to 34 are pending in the present application.

In view of the following, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

The Office Action has not rejected claims 19, 20, 22 to 24, 28 and 30 based on prior art. With the formal rejections now obviated by the amendments and remarks above, it is respectfully submitted that claims 19, 20, 22 to 24, 28 and 30 include allowable subject matter which would render these claims patentable if rewritten in independent form. Acknowledgement of the allowable subject matter is therefore respectfully requested.

With respect to paragraph five (5) of the Office Action, the drawings were objected to for assertedly omitting a flowchart describing the method of the claimed subject matter, and a characteristic map defining the functional relationships of the claimed subject matter. The Examiner's attention is respectfully directed to Figures 3 and 4 and the corresponding text of the Substitute Specification. Figure 3 shows each controlling area and the boundaries thereof. Figure 4 shows a timing diagram that illustrates a performing of the method of the claimed subject matter. As described beginning on page 6, line 25 of the Substitute Specification, the timing diagram of Figure 4 corresponds to an embodiment in which the method transitions between the first, second and third controlling areas shown in Figure 3. The conditions for the transitions (the method steps) are fully described.

Accordingly, it is respectfully submitted that one of ordinary skill in the art would understand how to implement the method of the claimed subject matter based on the drawings -- especially in view of the Substitute Specification.

With respect to paragraph six (6) of the Office Action, the drawings were objected to for assertedly omitting the first and second areas of operation. While the objection may not be agreed with, the first, second and third controlling areas described in the Specification have been clearly labeled in Figure 3 of the Replacement Sheets.

With respect to paragraph seven (7) of the Office Action, the drawings were objected to for assertedly being incomplete. As explained above, the drawings fully illustrate the claimed method. The drawings, e.g., Fig. 1, also show the device of the presently claimed

subject matter. Also, Figures 2 to 4 further describe the operation of the controller 12B in Fig. 1.

The attached four Replacement Sheets of Figs. 1 to 4 replace the original four sheets including Figs. 1 to 4.

In Fig. 1, descriptive text labels have been provided for the various boxes. The labels “dI_Last/dt” and “I_Last” respectively replace the labels “dI_” and “I_.”

In Fig. 2, descriptive text labels have been provided for the various boxes.

In Fig. 3, descriptive text labels have been provided for the various boxes. In particular, the first, second and third controlling areas have each been clearly labeled. The labels “U_H,” “U_L,” and “U_Soll” respectively replace the labels “U_Max,” “U_Min” and “U.”

In Fig. 4, the labels “U_Soll” and “I_Last” respectively replace the labels “U_” and “I_.”

The amendments to the drawings correct spelling errors and/or conform the drawings to the Specification. No new matter has been added, and the Replacement Sheets are supported by the present application, including the specification. Approval and entry are respectfully requested. Accordingly, the drawings, as presented, illustrate the claimed subject matter.

In view of the foregoing, withdrawal of the objections to the drawings is therefore respectfully requested.

With respect to paragraph nine (9) of the Office Action, claims 16 to 30 were rejected under 35 U.S.C § 112, first paragraph, as lacking enablement.

In rejecting claims 16 to 30, the Office Action has not articulated any reason why the claims are not enabled based on these factors. The Office Action conclusorily asserts that essential structure and/or steps are omitted from the claims. Thus, the Office Action’s assertions as to enablement are merely conclusory in nature rather than being based on an analysis of the aforementioned factors, as required by the MPEP. As explained above, the claimed subject matter is disclosed and supported, and it is therefore enabled.

As further regards the enablement rejections, it is respectfully submitted that the Office Action’s assertions and arguments presented do not reflect the standard for determining whether a patent application complies with the enablement requirement that the specification describe how to make and use the invention -- which is defined by the claims. (See M.P.E.P. § 2164). The Supreme Court established the appropriate standard as whether

any experimentation for practicing the invention was undue or unreasonable. (See M.P.E.P. § 2164.01 (citing Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916); In re Wands, 858 F.2d 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed Cir. 1988))). Thus, it is axiomatic that the enablement test is “whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.” (See id. (citing United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988))).

The Federal Circuit has made clear that there are many factors to be considered in determining whether a specification satisfies the enablement requirement, and that these factors include but are not limited to the following: the breadth of the claims; the nature of the invention; the state of the prior art; the level of ordinary skill; the level of predictability in the art; the amount of direction provided by the inventor; the existence of working examples; and the quantity of experimentation needed to make or use the invention based on the disclosure. (See id. (citing In re Wands, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404 and 1407))). In this regard, the Federal Circuit has also stated that it is “improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors,” and that the examiner's analysis must therefore “consider all the evidence related to each of these factors” so that any nonenablement conclusion “must be based on the evidence as a whole.” (See M.P.E.P. § 2164.01).

Also, an examiner bears the initial burden of establishing why the “scope of protection provided by a claim is not adequately enabled by the disclosure.” (See id. (citing In re Wright, 999 F.2d 1557, 1562, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993))). Accordingly, a specification that teaches the manner and process of making and using an invention in terms that correspond in scope to those used in describing and defining the claimed subject matter complies with the enablement requirement. (See id.).

In contrast to the above, however, it is respectfully submitted that the Office Action's unsupported assertions simply do not concern — as they must under the law — whether the present application enables a person having ordinary skill in the art to practice the claimed subject matter of the claims without undue experimentation — which it plainly does, as would be understood by a person having ordinary skill in the art in view of the disclosure of the present application, including the specification. In short, the Final Office Action's assertions are merely conclusory and do not address the issue of whether one having ordinary skill would have to unduly experiment to practice the claimed subject matter of the rejected

claims — *a proposition for which the Office bears the burden of proving a prima facie case as to the rejected claims.*

In this regard, to properly establish enablement or non-enablement, the Office must make use of proper evidence, sound scientific reasoning and the established law. In the case of Ex Parte Reese, 40 U.S.P.Q.2d 1221 (Bd. Pat. App. & Int. 1996), a patent examiner rejected (under the first paragraph of section 112) application claims because they were based on an assertedly non-enabling disclosure, and was promptly reversed because the rejection was based only on the examiner's subjective belief that the specification was not enabling as to the claims. In particular, the examiner's subjective belief was simply not supported by any “evidence or sound scientific reasoning” and therefore ignored recent case law — which makes plain that an examiner (and not an applicant) bears the burden of persuasion on an enablement rejection.

More particularly, the examiner in Ex parte Reese was reversed because the rejection had only been based on a conclusory statement that the specification did not contain a sufficiently explicit disclosure to enable a person to practice the claimed invention without exercising undue experimentation — which the Board found to be merely a conclusory statement that only reflected the subjective and unsupported beliefs of a particular examiner and that was not supported by any proper evidence, facts or scientific reasoning. (See id.). *Moreover, the Board made clear that it is “incumbent upon the Patent Office . . . to back up assertions of its own with acceptable evidence,” and also made clear that “[where an] examiner's 'Response to Argument' is not supported by evidence, facts or sound scientific reasoning, [then an] examiner has not established a prima facie case of lack of enablement under 35 U.S.C. § 112, first paragraph.”* (See id. at 1222 & 1223).

In the present case, the Office Action has not established that undue experimentation would be required. Moreover, even as to the assertions as presented, the present application plainly discloses how to use the subject matter of the rejected claims, as explained herein.

It is therefore respectfully requested that the enablement rejections be withdrawn in view of the foregoing.

With respect to paragraph eleven (11) of the Office Action, claims 16, 18 to 24 and 26 to 29 were rejected under 35 U.S.C § 112, second paragraph, as indefinite.

The Office Action asserts that the terms “area of operation,” “a function of,” “torque-influencing variable,” and “according to a functional relationship” are indefinite. As to the

term “area of operation” (recited in claim 16), while the rejection may not be agreed with, to facilitate matters, the claim 16 has been rewritten to better clarify the role of the first and second areas of operation. Claim 16, as presented, reads, in part, as follows:

[A] controller configured to control a voltage of the generator by outputting a control signal to the generator in response to changes in the generator voltage, wherein the controller provides **a first area of operation based on the value of the generator voltage, in which a voltage control is performed to regulate the generator voltage, to the exclusion of performing a torque control to regulate a braking torque exerted by the generator, and at least one second area of operation based on the value of the generator voltage, in which the torque control is performed, to the exclusion of performing the voltage control, the controller transitioning from the first area to the at least one second area when the generator voltage goes beyond one of a first upper threshold value and a first lower threshold value, the first upper threshold value and the first lower threshold value being defined by a boundary of the first area;**
wherein the generator is coupled to an engine to generate electrical power.

Further, the descriptions of the areas of operation are not merely “result” language. In the context of the electrical device of claim 16, the descriptions refer to the operation of the controller and constitute structural limitations, since the controller is defined in sufficiently definite terms.

As to the term phrase of “a function of” (claims 19, 23 and 27), it is respectfully submitted that one of ordinary skill in the art would have knowledge of the requisite degree of control required, e.g., using conventional setpoint control techniques. Accordingly, the control of torque as a function of a maximum allowable change in torque, and as a function of time, would be understood by one of ordinary skill in the art.

As to the term phrase of “torque influencing variable” (claims 23 and 24), the Office Action points out that there exists a plurality of variables that influence torque. Since these variables are well known, it is unnecessary to specify which variable is used, since any one of these variables may be suitable for use with the method of the claimed subject matter. As to the degree of influence required, as mentioned above, conventional setpoint control techniques are sufficient to perform the controlling of the torque. Further, one of ordinary skill in the art would understand the degree to which any one variable would be adjusted in order to achieve a corresponding change in torque.

As to the term phrase of "according to a functional relationship" (claims 24 and 28), the functional relationship refers to a relationship between a torque influencing variable and the torque. A change in the variable causes a corresponding change in torque. The change can be predicted since the influence of the variable on torque is known in the art, and may be recorded in the form of a characteristics map.

Accordingly, it is believed and respectfully submitted that claims 16, 18 to 24 and 26 to 29 are definite in view of the specification, since it would be understood by a person having ordinary skill in the art -- especially in view of the specification.

With respect to paragraph fifteen (15) of the Office Action, claims 19, 22 to 24 and 29 were rejected as being directed to non-statutory subject matter.

Claims 19 and 22 to 24 depend from claim 16, which is directed to an electrical device (i.e., a machine) for controlling a generator in an electrical system of a motor vehicle. Accordingly, claims 19 and 22 to 24 are directed to statutory subject matter, since base claim 16 refers to a machine.

Claim 29 depends from claim 25, which refers to a method (i.e., a process) for controlling an operation of a generator in connection with a vehicle electrical system of a motor vehicle. Accordingly, claims 29 is directed to statutory subject matter, since base claim 25 refers to a process.

Accordingly, it is respectfully submitted that claims 19, 22 to 24 and 29 are directed to statutory subject matter in accordance with 35 U.S.C § 101.

With respect to paragraph sixteen (16), claims 16 to 24 were rejected under 35 U.S.C § 112, second paragraph, for omitting essential elements.

In fact, means for obtaining and means for generating the operating characteristics of the system are not required as to the claims. As explained above, the torque influencing variables and their corresponding effects on torque are well understood. Similarly, variables that influence generator voltage are also well understood, such that the effect of the torque and voltage influencing variables on the system -- i.e., the operating characteristics -- is understood. Accordingly, a separate means for obtaining/generating the operating characteristics is unnecessary.

With respect to paragraph nineteen (19) of the Office Action, claims 16 to 18, 21, 25 to 27 and 29 were rejected under 35 U.S.C § 102(b) as anticipated by U.S. Patent No. 4,017,739 ("Hapeman").

As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed subject matter, namely the claimed subject matter of the claims, as discussed herein. (See *Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Final Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; and see *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

The Office Action conclusorily asserts that the first area of operation and the second area of operation are respectively disclosed by lines F-G and G-H of Figure 2 in Hapeman. As to col. 7, lines 7 to 35 of Hapeman, the line F-G corresponds to a maximum allowable voltage level and the line G-H corresponds to a maximum allowable power level. Figure 2 is a plot of voltage versus current and the shape of the curve shown defines the range of allowable voltage and current values. Figure 2 does not refer to separate areas of voltage control and torque control -- areas which, according to claims 16 and 25, are *mutually exclusive*. In addition, Hapeman refers to control of voltage and current rather than voltage and *torque*. Thus, the curve of Figure 2 defines a *single area of operation* in which *both* voltage and current are controlled.

Accordingly, claims 16 and 25, as presented, is allowable, as are dependent claims 17, 18, 21, 26, 27 and 29.

Withdrawal of the rejections is therefore respectfully requested.

In sum, claims 16 to 30 are allowable.

Claims 31 to 34 do not add any new matter and are supported by the present application, including the specification. Claims 31 to 34 depend from claim 16, as presented, and are therefore allowable for the same reasons as claim 16, as presented, and because they include further combination of features not disclosed by the applied references.

In sum, claims 16 to 34 are allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that all of presently pending claims 16 to 34 are allowable. It is therefore respectfully requested that the objections and rejections be withdrawn. Since all issues raised by the Examiner have been addressed, an early and favorable action on the merits is respectfully requested.

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Respectfully submitted,

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